Mα2Mα6Mα4G-Y

EtN-P-Mα2Mα6M-Y

EtN-P-[Mα2][G]Mα2Mα6Mα4G-Y

EtN-P-[Mα2][X]Mα2Mα6Mα4G-Y

EtN-P-[Mα2][EtN-P]Mα2Mα6Mα4G-Y

Mα2[Mα2][G]Mα2Mα2Mα6Mα4G-Y

Mα2[Mα2][X]Mα2Mα6Mα4G-Y

Mα2[Mα2][EtN-P]Mα6Mα4G-Y

Mα6Mα4Gα6Ino-Y

Mα2Mα6Mα4Gα6Ino-Y

Mα2[Mα2]Mα6Mα4Gα6Ino-Y

Mα2[Mα2][G]Mα6Mα4Gα6Ino-Y

Mα2[Mα2][X]Mα6Mα4Gα6Ino-Y

EtN-P-[Mα2][G]Mα2Mα6M-Y

EtN-P-[Mα2][X]Mα2Mα6M-Y

EtN-P-[Mα2][EtN-P]Mα2Mα6M-Y

Mα2[Mα2][G]Mα2Mα6M-Y

Mα2[Mα2][X]Mα2Mα6M-Y

Mα2[Mα2][EtN-P]Mα6M-Y

Mα2Mα6M-Y

Mα6Mα4G-Y

EtN-P-[Mα2][G]Mα2M-Y

EtN-P-[Mα2][X]Mα2M-Y

EtN-P-[Mα2][EtN-P]Mα2M-Y

or derivatives or equivalents thereof wherein EtN is ethanolamine, P is phosphate, M is mannose, G is non-N-acetylated glucosamine, [G] is any non-N-acetylated hexosamine including glucosamine, or any other nitrous-acid labile substituent, Ino is inositol or inositol-phosphoglycerol, [X] is any other substituent, a represents a-linkages which may be substituted with β-linkages wherever required, numeric values represent positional linkages

which may be substituted with any other positional linkages as required, and Y is any lipid or phospholipid.

Please cancel claims 19-77 without prejudice or disclaimer and add the following new claims 78-136:

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79 ~~78~~. The method according to claim 17 wherein said helper T cell is a $CD4^+$ T cell.

80 ~~79~~. The method according to claim 78 wherein said $CD4^+$ T cell is a $CD4^+$, NK1.1 T cell.

81 ~~80~~. A method of inducing, in a mammal, an immune response directed to GPI said method comprising administering to said mammal a T cell activating effective amount of GPI or derivative or equivalent thereof which GPI is capable of interacting with CD1 on an immune cell to form an association with CD1 which association activates helper T cells.

82 ~~81~~. The method according to claim 80 wherein said helper T cell is a $CD4^+$ cell.

83 ~~82~~. The method according to claim 81 wherein said $CD4^+$ T cell is a $CD4^+$ $NK1.1^+$ T cell.

84 ~~83~~. The method according to claim 80 wherein said GPI is *Plasmodium.*

85 ~~84~~. The method according to claim 83 wherein said *Plasmodium is P. falciparum.*

86 ~~85~~. The method according to claim 80 wherein said GPI comprises a structure selected from:

EtN-P-[Mα2]Mα2Mα6Mα4Gα6Ino-Y

EtN-P-[Mα2][G]Mα2Mα6Mα4Gα6Ino-Y

EtN-P-[Mα2][X]Mα2Mα6Mα4Gα6Ino-Y

EtN-P-[Mα2][EtN-P]Mα2Mα6Mα4Gα6Ino-Y

EtN-P-Mα2Mα6Mα4G-Y

Mα2Mα6Mα4G-Y

EtN-P-Mα2Mα6M-Y

EtN-P-[Mα2][G]Mα2Mα6Mα4G-Y

EtN-P-[Mα2][X]Mα2Mα6Mα4G-Y

EtN-P-[Mα2][EtN-P]Mα2Mα6Mα4G-Y

Mα2[Mα2][G]Mα2Mα6Mα4G-Y

Mα2[Mα2][X]Mα2Mα6Mα4G-Y

Mα2[Mα2][EtN-P]Mα6Mα4G-Y

Mα6Mα4Gα6Ino-Y

Mα2Mα6Mα4Gα6Ino-Y

Mα2[Mα2]Mα6Mα4Gα6Ino-Y

Mα2[Mα2][G]Mα6Mα4Gα6Ino-Y

Mα2[Mα2][X]Mα6Mα4Gα6Ino-Y

EtN-P-[Mα2][G]Mα2Mα6M-Y

EtN-P-[Mα2][X]Mα2Mα6M-Y

EtN-P-[Mα2][EtN-P]Mα2Mα6M-Y

Mα2[Mα2][G]Mα2Mα6M-Y

Mα2[Mα2][X]Mα2Mα6M-Y

Mα2[Mα2][EtN-P]Mα6M-Y

Mα2Mα6M-Y

Mα6Mα4G-Y

EtN-P-[Mα2][G]Mα2M-Y

EtN-P-[Mα2][X]Mα2M-Y

EtN-P-[Mα2][EtN-P]Mα2M-Y

or derivatives or equivalents thereof wherein EtN is ethanolamine, P is phosphate, M is mannose, G is non-N-acetylated glucosamine, [G] is any non-N-acetylated hexosamine including glucosamine, or any other nitrous-acid labile substituent, Ino is inositol or inositol-phosphoglycerol, [X] is any other substituent, α represents α-linkages which may be substituted with β-linkages wherever required, numeric values represent positional linkages which may be substituted with any other positional linkages as required, and Y is any lipid or phospholipid.

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87 (was 86). The method according to claim 85 wherein said lipid is diacylglycerol, alkylacyglycerol, monoalkylglycerol, ceramide or sphingolipid.

88 (was 87). The method according to claim 85 wherein said phospholipid is phosphatidylethanolamine, phosphatidylcholine or phosphatidylserine.

89 (was 88). A method of inducing, in a mammal, an immune response directed to an antigen, said method comprising administering to said mammal a helper T cell activating effective amount of GPI or derivative or equivalent thereof complexed to said antigen, which GPI-antigen complex is capable of interacting with CD1 on an immune cell to form an association with CD1 which association activates helper T cells.

90 (was 89). The method according to claim 88 wherein said helper T cell is a $CD4^+$ T cell.

91 (was 90). The method according to claim 89 wherein said $CD4^+$ T cell is a $CD4^+$ $NK1.1^+$ T cell.

92 (was 91). The method according to claim 88 wherein said antigen is malarial CS protein or derivative or equivalent thereof.

93. (was 92). The method according to claim 88 wherein said antigen is MSP-1 or derivative or equivalent thereof.

94 (was 93). The method according to claim 88 wherein said antigen is MSP-2 or derivative or equivalent thereof.

95. (was 94). The method according to claim 88 wherein said antigen is *Leishmanial* PSA-2 or derivative or equivalent thereof.

96. (was 95). The method according to claim 88 wherein said antigen is GP63 or derivative or equivalent thereof.

97. (was 96). The method according to claim 88 wherein said GPI comprises a structure selected from:

EtN-P-[Mα2]Mα2Mα6Mα4Gα6Ino-Y

EtN-P-[Mα2][G]Mα2Mα6Mα4Gα6Ino-Y

EtN-P-[Mα2][X]Mα2Mα6Mα4Gα6Ino-Y

EtN-P-[Mα2][EtN-P]Mα2Mα6Mα4Gα6Ino-Y

EtN-P-Mα2Mα6Mα4G-Y

Mα2Mα6Mα4G-Y

EtN-P-Mα2Mα6M-Y

EtN-P-[Mα2][G]Mα2Mα6Mα4G-Y

EtN-P-[Mα2][X]Mα2Mα6Mα4G-Y

EtN-P-[Mα2][EtN-P]Mα2Mα6Mα4G-Y

Mα2[Mα2][G]Mα2Mα6Mα4G-Y

Mα2[Mα2][X]Mα2Mα6Mα4G-Y

Mα2[Mα2][EtN-P]Mα6Mα4G-Y

Mα6Mα4Gα6Ino-Y

Mα2Mα6Mα4Gα6Ino-Y

Mα2[Mα2]Mα6Mα4Gα6Ino-Y

Mα2[Mα2][G]Mα6Mα4Gα6Ino-Y

Mα2[Mα2][X]Mα6Mα4Gα6Ino-Y

EtN-P-[Mα2][G]Mα2Mα6M-Y

EtN-P-[Mα2][X]Mα2Mα6M-Y

EtN-P-[Mα2][EtN-P]Mα2Mα6M-Y

Mα2[Mα2][G]Mα2Mα6M-Y

Mα2[Mα2][X]Mα2Mα6M-Y

Mα2[Mα2][EtN-P]Mα6M-Y

Mα2Mα6M-Y

Mα6Mα4G-Y

EtN-P-[Mα2][G]Mα2M-Y

EtN-P-[Mα2][X]Mα2M-Y

EtN-P-[Mα2][EtN-P]Mα2M-Y

or derivatives or equivalents thereof wherein EtN is ethanolamine, P is phosphate, M is mannose, G is non-N-acetylated glucosamine, [G] is any non-N-acetylated hexosamine including glucosamine, or any other nitrous-acid labile substituent, Ino is inositol or inositol-phosphoglycerol, [X] is any other substituent, α represents α-linkages which may be substituted with β-linkages wherever required, numeric values represent positional linkages which may be substituted with any other positional linkages as required, and Y is any lipid or phospholipid.

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98. ~~97.~~ The method according to claim 96 wherein said lipid is diacylglycerol, alkylacyglycerol, monoalkylglycerol, ceramide or sphingolipid.

99. ~~98.~~ The method according to claim 96 wherein said phospholipid is phosphatidylethanolamine, phosphatidylcholine or phosphatidylserine.

100. ~~99.~~ The method according to claim 80 wherein said activated helper T cell provides B cell help.

101. ~~100.~~ The method according to claim 80 wherein said activated T cells induce or otherwise upregulate a TH1 type response.

102. ~~101.~~ The method according to claim 80 wherein said activated T cells induce or otherwise upregulate a TH2 type response.

103. ~~102.~~ A method for the treatment and/or prophylaxis of a mammalian disease condition comprising administering to said mammal an effective amount of GPI or derivative or equivalent thereof or a complex comprising said GPI or derivative or equivalent thereof which GPI or GPI-complex is capable of interacting with CD1 on an immune cell to form an association with the CD1 which association activates helper T cells.

104. ~~103.~~ The method according to claim 102 wherein said helper T cell is a $CD4^+$ T cell.

105. ~~104.~~ The method according to claim 103 wherein said $CD4^+$ T cell is a $CD4^+$ $NK1.1^+$ T cell.

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106. ~~105.~~ The method according to claim 102 wherein said activated T cell provides B cell help.

107. ~~106.~~ The method according to claim 102 wherein said activated T cells induce or otherwise upregulate a TH1 type response.

108. ~~107.~~ The method according to claim 102 wherein said activated T cells induce or otherwise upregulate a TH2 type response.

109. ~~108.~~ A method for the treatment and/or prophylaxis of a mammalian disease condition characterized by microorganism infection, said method comprising administering to said mammal an effective amount of GPI or derivative or equivalent thereof or a complex comprising said GPI or derivative or equivalent thereof which GPI or GPI complex is capable of interacting with CD1 on an immune cell to form an association with CD1 which association activates helper T cells.

110. ~~109.~~ The method according to claim 108 wherein said microorganism infection is a parasitic infection.

111. ~~110.~~ The method according to claim 109 wherein said complex comprises GPI and malarial CS protein or derivative or equivalent thereof.

112. ~~111.~~ The method according to claim 109 wherein said complex comprises GPI and MSP-1 or derivative or equivalent thereof.

113. ~~112.~~ The method according to claim 109 wherein said complex comprises GPI and MSP-2 or derivative or equivalent thereof.

114. ~~113.~~ The method according to claim 109 wherein said complex comprises *Leishmanial* PSA-2 or derivative or equivalent thereof.

115. ~~114.~~ The method according to claim 109 wherein said complex comprises GPI and GP63 or derivative or equivalent thereof.

116. ~~115.~~ The method according to claim 108 wherein said GPI comprises a structure selected from:

EtN-P-[Mα2]Mα2Mα6Mα4Gα6Ino-Y

EtN-P-[Mα2][G]Mα2Mα6Mα4Gα6Ino-Y

EtN-P-[Mα2][X]Mα2Mα6Mα4Gα6Ino-Y

EtN-P-[Mα2][EtN-P]Mα2Mα6Mα4Gα6Ino-Y

EtN-P-Mα2Mα6Mα4G-Y

Mαt2Mα6Mα4G-Y

EtN-P-Mα2Mα6M-Y

EtN-P-[Mα2][G]Mα2Mα6Mα4G-Y

EtN-P-[Mα2][X]Mα2Mα6Mα4G-Y

EtN-P-[Mα2][EtN-P]Mα2Mα6Mα4G-Y

Mα2[Mα2][G]Mα2Mα6Mα4G-Y

Mα2[Mα2][X]Mα2Mα6Mα4G-Y

Mα2[Mα21[EtN-P]Mα6Mα4G-Y

Mα6Mα4Gα6Ino-Y

Mα2Mα6Mα4Gα6Ino-Y

Mα2[Mα2]Mα6Mα4Gα6Ino-Y

Mα2[Mα2][G]Mα6Mα4Gα6Ino-Y

Mα2[Mα2][X]Mα6Mα4Gα6Ino-Y

EtN-P-[Mα2][G]Mα2Mα6M-Y

EtN-P-[Mα2][X]Mα2Mα6M-Y

EtN-P-[Mα2I[EtN-P]Mα2Mα6M-Y

Mα2[Mα2][G]Mα2Mα6M-Y

Mα2[Mα2][X]Mα2Mα6M-Y

Mα2[Mα2][EtN-P]Mα6M-Y

Mα2Mα6M-Y

Mα6Mα4G-Y

EtN-P-[Mα2][G]Mα2M-Y

EtN-P-[Mα2][X]Mα2M-Y

EtN-P-[Mα2][EtN-P]Mα2M-Y

or derivatives or equivalents thereof wherein EtN is ethanolamine, P is phosphate, M is mannose, G is non-N-acetylated glucosamine, [G] is any non-N-acetylated hexosamine including glucosamine, or any other nitrous-acid labile substituent, Ino is inositol or inositol-phosphoglycerol, [X]is any other substituent, α represents α-linkages which may be substituted with β-linkages wherever required, numeric values represent positional linkages which may be substituted with any other positional linkages as required, and Y is any lipid or phospholipid.

Rule 1126 117. ~~116.~~ The method according to claim 115 wherein said lipid is diacylglycerol, alkylacyglycerol, monoalkylglycerol, ceramide or sphingolipid.

118. ~~117.~~ The method according to claim 115 wherein said phospholipid is phosphatidylethanolamine, phosphatidylcholine or phosphatidylserine.

119 ~~118.~~ The method according to claim 108 wherein said parasitic infection is a *Plasmodium* infection.

120 ~~119.~~ The method according to claim 118 wherein said *Plasinodium* is *P. falciparum.*

121 ~~120.~~ The method according to claim 108 wherein said parasitic infection is a *Leishmania* infection.

122. ~~121.~~ A method for the treatment and/or prophylaxis of a mammalian disease condition characterized by the insufficiency or absence of an appropriate TH1 response said method comprising administering to said mammal an effective amount of GPI or derivative or equivalent thereof or a complex comprising said GPI or derivative or equivalent thereof which GPI or GPI complex is capable of interacting with CD1 on an immune cell to form an association with CD1 which association induces or otherwise upregulates a TH1 response.

123 ~~122.~~ The method according to claim 121 wherein said disease condition is Leishmaniasis, a neoplastic condition or cancer.

124. ~~123.~~ A method for the treatment and/or prophylaxis of a mammalian disease condition characterized by the insufficiency or absence of an appropriate TH2 response said

method comprising administering to said mammal an effective amount of GPI or derivative or equivalent thereof or a complex comprising said GPI or derivative or equivalent thereof which GPI or GPI complex is capable of interacting with CD1 on an immune cell to form an association with CD1 which association induces or otherwise upregulates a TH2 response.

Rule 1.126 125. ~~124.~~ The method according to claim 123 said disease condition is cerebral malaria, type I diabetes, autoimmune arthritis or systemic lupus erythromatosis.

126. ~~125.~~ Use of a composition comprising GPI or derivative or equivalent thereof or a complex comprising GPI or derivative or equivalent thereof in the manufacture of a medicament for the therapeutic and/or prophylactic treatment of a mammalian disease condition wherein said GPI or GPI complex is capable of interacting with CD1 on an immune cell to form an association with CD1 which association activates helper T cells.

127. ~~126.~~ Use according to claim 125 wherein said mammalian disease condition is a microorganism infection.

128. ~~127.~~ Use according to claim 126 wherein said microorganism is *Plasmodium.*

129 ~~128.~~ Use according to claim, 127 wherein said *Plasmodium* is *P. falciparum.*

130. ~~129.~~ Use according to claim 126 wherein said microorganism is *Leishmania.*

131 ~~130.~~ Use according to claim 125 wherein said disease condition is characterized by the insufficiency or absence of an appropriate TH1 response.

132. ~~131.~~ Use according to claim 130 wherein said disease condition is Leishmaniasis, a neoplastic condition or cancer.

133. ~~132.~~ Use according to claim 125 wherein said disease condition is characterized by the insufficiency or absence of an appropriate TH2 response.

134. ~~133.~~ Use according to claim 132 wherein said disease condition is cerebral malaria, type I diabetes, autoimmune arthritis or systemic lupus erythromatosis.

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135 ~~134.~~ A composition capable of activating helper T cells, said composition comprising a GPI or derivative or equivalent thereof or a complex comprising GPI or derivative or equivalent thereof which GPI or GPI-complex is capable of interacting with CD1 on an immune cell to form an association with CD 1 which association activates helper T cells.

136. ~~135.~~ A vaccine composition comprising as the active component a GPI or derivative or equivalent thereof or a complex comprising GPI or derivative or equivalent thereof which GPI or GPI-complex is capable of interacting with CD1 on an immune cell to form an association with CD1 which association activates helper T cells.

137. ~~136.~~ A pharmaceutical composition capable of activating helper T cells, said composition comprising a GPI or derivative or equivalent thereof or a complex comprising GPI or derivative or equivalent thereof which GPI or GPI-complex is capable of interacting with CD1 on an immune cell to form an association with CD1, which association activates helper T cells, together with one or more pharmaceutically acceptable carriers and/or diluents.--